## **Concerticut** still revolutionary

# 2015

## Economic Development Strategy



"Connecticut has always been a birthplace of innovation... The question before us now is 'what's next?"" Governor Dannel P. Malloy, State-of-the-State Address, January 7, 2015

#### Introductions



Our shared history in Connecticut demonstrates a commitment to new ideas and betterment of the old. From the invention of the sewing machine to decades of leading the insurance industry to the development and production of fuel cells, we in Connecticut have spent centuries showing the world how to improve. From world-ranking productivity to one of the highest levels of foreign

direct investment, Connecticut models the attributes that are defining the modern economy. As we move further into the 21<sup>st</sup> century, Connecticut is dedicated to continuing to innovate and live up to our rich history as a national and world leader.

Connecticut's strength starts with its people. We have the third most educated workforce in the nation, as well as the healthiest residents and the highest per capita income. We are a community of forward-thinkers, innovators, and researchers. By aligning education more closely with the needs of the private sector, Connecticut is ensuring that future generations have the skills to transform our world.

Connecticut Rankings in the United States	s1
Healthy Residents	l st
Share of Finance & Insurance Jobs	3rd
Advanced Degrees per Capita	3 <sup>rd</sup>
State Innovation	4 <sup>th</sup>
Productivity per Capita	4 <sup>th</sup>
Business Research & Development per Capita	5 <sup>th</sup>
Scientists & Engineers per Capita	5 <sup>th</sup>
Energy Efficiency	6 <sup>th</sup>
Venture Capital Deals per 1 Million Residents	7th
Patents per 100,000 workers	7 <sup>th</sup>

Connecticut also possesses an unparalleled quality of life. The abundance of natural resources, extensive network of cultural and creative assets, and variety of communities make Connecticut a great place to live and do business. Our location is ideal for residents and businesses alike, with ready access to

major markets, financial centers, and colleges and universities. Within a one-day drive from Central Connecticut is one-third of the U.S. economy and two-thirds of the Canadian economy, making Connecticut one of the best locations in the nation.

The state of Connecticut has not cultivated its many successes without encountering challenges. The economic recession that began in 2007 caused a serious economic downturn in Connecticut. However, over the past five years, the state has regained nearly all of the private sector jobs lost in the Great Recession.

For the past year, with Connecticut's economic recovery in full swing, the state has been developing and executing a strategic plan. This plan calls for investing in industries, anchor companies, and the quality of life that provide a strong foundation for the state's

<sup>&</sup>lt;sup>1</sup> Eversource, 2015 Connecticut Economic Review

economy. Many companies in Connecticut participate in national and international trade across various sectors. The Manufacturing Innovation Fund, the Bioscience Innovation Fund, and the Connecticut Port Authority are examples of the recent initiatives coming out of our strategic plan that are helping to expand business opportunities in Connecticut.

> In order to maximize our strengths, the Economic Development Strategic Plan has targeted priority investment areas including healthcare/bioscience, insurance and financial services, advanced manufacturing, digital media, tourism, and green technologies, with attention to how these sectors collaborate and intersect. Within these

targeted industries are more specialized areas that show promise for the Connecticut economy including biomedical devices, aircraft manufacturing, and boat building.

The significant planned investment in Connecticut's infrastructure and cities over the next decade will reap many economic benefits. Not only will updated infrastructure make doing business in Connecticut easier, the state's continued streamlining of permitting processes will ensure that businesses are able to focus on creating jobs and increasing capacity. Connecticut is also committed to utilizing and encouraging energy efficiency and alternative energy sources and to the continued betterment of education in the state.

The vision for Connecticut is one of innovation and excellence in people, places and organizations — in other words, vibrancy. This vibrancy will continue to attract talented and creative people and grow businesses. Our attention to, and investment in, the identified strategic areas of talent development, economic growth, and strong communities will be rewarded with long-term stability for our state.

#### Strategic Plan

Economic development is most effective when approached with a clear vision, an eye for long-term stability and growth, and a strong plan of execution. While the state needs to

continue to manage its finances responsibly and maintain efforts to streamline government, we also must make the required investments to move our economy forward and innovate in ways that will benefit all Connecticut residents. Given that Connecticut has an impressive standing in many areas, this plan builds on our strengths while making changes to address our shortcomings.



#### Our Vision

Connecticut ranks among the top quartile of states in economic performance

#### **Our Mission**

Develop and implement strategies to increase the state's economic competitiveness

#### Our Objective

Build on our established strengths, invest in growth and emerging sectors; differentiate based on our key assets:

- Grow the Business Clusters that Drive Connecticut's Economy and Encourage Entrepreneurial Development
  - 1. Retain and grow our existing job base
  - 2. Facilitate ecosystems for industries to strengthen, connect, and collaborate
  - 3. Support entrepreneurial activities
  - 4. Build exports and encourage foreign direct investment
  - 5. Promote Connecticut's brand effectively nationally and internationally

#### Ensure a Workforce that Meets the Needs of the Future

- 1. Understand the future needs of employers
- 2. With education partners, grow and enrich our talent pool and develop both short and long range initiatives to invest in our institutions around the key STEAM (science, technology, engineering, arts, and mathematics) skills

#### Create Livable, Vibrant Communities

- 1. Create vibrant neighborhoods through innovation, art, culture, and historic preservation
- 2. Ensure quality housing at a broad range of prices

#### Invest in Infrastructure and Support Systems that will Foster Business Growth

- 1. Continue to strategically invest in transportation infrastructure
- 2. Work to reduce or offset the cost of energy while reducing greenhouse gas emissions
- 3. Continue efforts to create a more responsive government that reforms the regulatory environment and makes it easier to do business in the state
- 4. Encourage environmentally-friendly, modern, and resilient development

#### GROW THE BUSINESS CLUSTERS THAT DRIVE CONNECTICUT'S ECONOMY AND ENCOUAGE ENTREPRENEURIAL



#### DEVELOPMENT

Industry cluster strategies are an important component of a comprehensive economic development strategy. By understanding Connecticut's particular strengths, we can target economic development resources on businesses with the best opportunity to succeed.

The state has developed growth strategies around six industry clusters: health care/bioscience, financial services and insurance, advanced manufacturing, digital

media, green technology and tourism. With an increasingly automated world, refined and technical industries will be the centerpiece of the future global economy. Advanced

industries, as termed by the Brookings Institute, are those that are research-intensive and utilize science, mathematics, engineering, and technology skills. These advanced industries, like aerospace manufacturing and bioscience, provide strategic opportunities for Connecticut because of high employment concentration. Of the 100 large metropolitan areas with high concentrations in advanced industry employment and related workforce talent, four are in or encompass part of Connecticut.<sup>2</sup>

These strategic targets are based on three key guiding questions:

- 1.) In which areas do we have current size, depth and leadership positions?
- 2.) In which parts of the economy are we likely to see the fastest rates of national and global growth?
- 3.) In which high growth areas do we have the talent and ingenuity to compete?

From the chart below, it's clear that we have strong presence in the health care/bioscience, financial services/insurance, and manufacturing sectors. These three sectors account for 35% of state GDP.<sup>3</sup> Selecting these particular clusters will build upon the considerable strengths of our current employers and university skills.

We must also look to the future to ensure we are investing in areas that are small today, but have growth potential. Thus, emerging opportunities in targeted areas remains a priority.



To determine Connecticut's competitiveness in certain industries or clusters, the location quotient (LQ) is used. The location quotient compares Connecticut's density of jobs in a particular occupation in comparison to the national average. Three of the state's six strategic clusters, digital media, green technology, and tourism, had an LQ in 2012 less than one, indicating an opportunity for Connecticut to grow local businesses in these clusters. Our policy goals are geared to growing these clusters to increase their competitive positioning. The other three clusters, insurance and finance, advanced

<sup>&</sup>lt;sup>2</sup> The Brookings Institute, "America's Advanced Industries,"

http://www.brookings.edu/research/reports2/2015/02/03-advanced-industries#/M10420, (February 2015) <sup>3</sup> U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School, 2013

manufacturing, and health and biosciences, had an LQ of more than one, a distinct competitive advantage in the regional economy. Policy goals should protect and enhance these clusters. The chart below shows historic and projected employment growth in the state's six target clusters.



Source: Connecticut Economic Resource Center, 2015

Clusters by the Numbers

- Total employment for these six clusters grew by 13% from 2004 to 2014 as compared to 9% growth across all industries.<sup>4</sup>
- Total employment in Connecticut for these six clusters is projected to grow by 15% from 824,301 in 2014 to 944,206 in 2024 as compared to 11% growth across all industries.
- Average annual earnings in the six strategic clusters were significantly higher than the state average in 2013 and represented an excellent opportunity for individuals in Connecticut to earn livable earnings. The average annual earnings for the aggregate of these six clusters was \$89,508 as compared to \$65,056 across all sectors.<sup>5</sup>
- The aggregate of exports from these sectors was \$127 billion or 55% of total state exports in 2013. Similarly, the aggregate of sales from these sectors was \$208 billion or 47.3% of total state sales in 2013.<sup>6</sup>

<sup>&</sup>lt;sup>4</sup> All Business Cluster data came from Economic Modeling Specialists International. Employment data is full coverage meaning it includes QCEW employees, non-QCEW employees, self-employed, and extended proprietors. <sup>6</sup> Some NAICS codes used were updated from 2007 NAICS codes to 2012 NAICS codes.

Some NAICS codes used were updated non 2007 NAICS codes to 2012 In the codes.
 Please note, clusters originally included employment under the NAICS codes of 9271 (Space Research and Technology) and 92613 (Regulation and Administration of Communications, Electric, Gas, and Other Utilities). However due to data constraints, we were unable to include employment data from those industries in the analysis.

Targeted investment of economic development funds in these industry clusters is expected to further develop the state's competitive advantage and foster an increased inflow of resources from abroad.

#### **Overview of Business Clusters**

Healthcare/Bioscience: Healthcare promises to be a strong driver of employment in



the coming decade. Traditional healthcare jobs in healthcare delivery will grow due to the aging of the baby boomers and their need for additional healthcare services. Connecticut also will see growth from its strong position in life sciences (including pharma, medical devices, and genomics) due to the strength of the university research community and the strong array of companies expanding their R&D and manufacturing presence in the state. The cluster's competitiveness is also fueled by the

highly effective technology transfer offices at Yale and UConn.

Connecticut's groundbreaking stem cell research legislation of a decade ago provided a platform for Yale, UConn and Wesleyan University to strengthen their position in the top tier of institutions/regions focused on this important field by supporting research and development as well as laboratory infrastructure. The recruitment of The Jackson Laboratory to Connecticut, with its expertise in personalized medicine research, complements research and tech transfer at our top universities and hospitals. Their strong reputation helps to enhance Connecticut's visibility as a global leader in life science research.

Currently, the bioscience cluster in Connecticut is composed of over 50,000 employees at more than 800 companies.<sup>7</sup> This industry is bolstered by Connecticut's educated workforce, with the fifth highest percentage of science and engineering doctorates in the nation.<sup>8</sup> The State of Connecticut demonstrated commitment to facilitating translational

research and forward-thinking work in the bioscience field with the creation of the Connecticut Bioscience Innovation Fund (CBIF) in 2013. CBIF is working to invest \$200 million in innovative and promising bioscience research and companies over ten years.<sup>9</sup>



Within the bioscience industry in Connecticut, 28% are biomedical device jobs – a sub cluster that shows promise for strong future growth.<sup>10</sup> Biomedical device development marries two of Connecticut's target industries: healthcare/bioscience and precision/advanced manufacturing.

Insurance/Finance: For over one hundred years, the insurance industry has been synonymous with Hartford and Connecticut because of the state's competitive focus on technology; an unyielding commitment to quality and service-excellence for the consumer; a global reach to the consumer and financial markets; and the most educated and experienced financial services employees in the world. In addition to the robust insurance industry, Connecticut benefits from the presence of myriad other financial services organizations, including private equity firms, hedge funds, venture capital firms,

<sup>&</sup>lt;sup>7</sup> Batelle/BIO State Bioscience Jobs, Investments and Innovation, 2014; The Connecticut Economic Digest, 2012 <sup>8</sup> National Science Foundation, 2014

<sup>&</sup>lt;sup>e</sup> Connecticut Bioscience Innovation Fund, http://www.bioinnovationct.com/ctbioscience-fund/ <sup>10</sup> The Connecticut Economic Digest, Vol. 17, No. 2.

and several national and international banks. The finance subsection of the industry in Connecticut is projected to grow by as much as 30% by 2024.<sup>11</sup>



In 2012, finance and insurance accounted for 16.1% of the state's economy.<sup>12</sup> Connecticut is 3<sup>rd</sup> in the finance and insurance share of total employment in 2014.<sup>13</sup> Approximately 300,000 additional jobs in the state result from activities in the finance and insurance industries.<sup>14</sup> The state is home to financial industry giants such as AETNA, Hartford Steam Boiler, The Hartford, CIGNA, Bridgewater Associates, and AQR Capital

Management, as well as many other strong small and midsize organizations like Webster Bank, People's United Bank, and ConnectiCare.

A focus area for Connecticut is continued leadership in the hedge fund, private equity and venture capital industries. The state is currently 2<sup>nd</sup> in assets managed in hedge funds with more than \$300 billion managed by Connecticut firms.<sup>15</sup> Given the strength of this sector and the large amount of data that is gathered by Connecticut companies, there is also growing potential in the data analysis, data management, and cyber security industries in the state as well.

Advanced Manufacturing: Connecticut remains robust in manufacturing despite employment growth challenges in the past two decades. Connecticut ranks 5<sup>th</sup> in the

states in business R&D invested per capita and 4<sup>th</sup> for workforce productivity.<sup>16</sup> The major global players in this industry such as Electric Boat, Sikorsky, Pratt & Whitney, and Kaman call Connecticut home and are supported by a strong supply chain of more than one hundred aerospace component manufacturers and hundreds of other advanced manufacturing companies.<sup>17</sup>



<sup>&</sup>lt;sup>11</sup> Connecticut Economic Resource Center, 2014

<sup>&</sup>lt;sup>12</sup> U.S. Bureau of Economic Analysis, 2012

<sup>&</sup>lt;sup>13</sup> Eversource, 2015 Connecticut Economic Review

<sup>14</sup> U.S. Commerce Department, BEA, "Regional Multipliers" (RIMS II), Third Edition

<sup>&</sup>lt;sup>15</sup> Connecticut Hedge Fund Association, Presentation to Commission on Connecticut's Leadership in Business and Corporation Law, July 2015

<sup>&</sup>lt;sup>16</sup> Eversource, 2015 Connecticut Economic Review

<sup>&</sup>lt;sup>17</sup> Aerospace Component Manufacturers (ACM), <u>ACM Membership List.pdf</u>



#### MSAs with Largest Employment in Aircraft Subcluster (Total CT MSAs in Yellow)

Source: Connecticut Economic Resource Center, 2015





The state leads in the fields of advanced manufacturing such as aerospace, additive manufacturing, and underwater defense technology. Aerospace looks to be especially promising in the coming years, as the demand for commercial airplanes has been skyrocketing. As the need for aerospace parts and components have increased Connecticut companies have benefitted, and, in 2014, Connecticut aerospace exports were \$6.9 billion or 43% all exports from the state.<sup>18</sup> The aerospace industry, as well as other manufacturing subsets, have benefitted from a tightly linked group of supply chain companies, many of which comprise the Aerospace Components Manufacturers association.

The State of Connecticut has committed to growing manufacturing through a dedicated \$70 million to fund supports for the manufacturing industry. Through the Manufacturing Innovation Fund (MIF), Connecticut manufacturing companies have the opportunity for

<sup>&</sup>lt;sup>18</sup> The Connecticut Economic Digest, Volume 20, No. 4

assistance in areas crucial to remaining competitive. The MIF is governed by representatives from industry and assists companies with funding for the most critical demands posed by the rapid growth of the industry: providing incumbent worker training, process improvement support, and new equipment. Connecticut was also recently awarded the Investing in Manufacturing Communities Partnership (IMCP) designation from the Economic Development Administration. This designation will provide the state preference and access to approximately \$1 billion of grant opportunities. The focus is to support the aerospace and shipbuilding industries.

Digital Media: This fast-growing creative industry is comprised of numerous production



and post-production facilities, digital animation, film, and gaming companies. The field involves the creative convergence of digital arts, science, technology, and business to present information in visually compelling and innovative ways. It constitutes a set of skills that are increasingly relevant in the corporate world, entertainment industry,

science and technology realms, mass media, education, and numerous other fields.

Since 2006, average spending in this industry has been \$200 million per year. This increase has been fueled in part by the state's attractive tax credit programs and the arrival of many new industry players. Connecticut is home to many industry giants such as ESPN, NBC Sports, and WWE, as well as television networks such as YES and A&E. Several talk shows and digital movie studios like Blue Sky Studios, a division of 20<sup>th</sup> Century Fox, also are located in the state.

In recognition of the potential of this cluster, the state has supported the creation of two undergraduate degrees being offered by UConn in digital media and design. The degrees are cross-disciplinary programs intended to give students in Connecticut a competitive edge for career success in the rapidly growing job market and to provide employers in the industry access to the required skill sets to further develop their markets.

Green Technology: National and global policy attention is being focused on renewable energy and energy efficiency. Connecticut is well positioned to take advantage of these trends building upon the early successes we have seen in this arena. We are a global leader in fuel cells (with 30% of the U.S. jobs and more than 50% of the

regional jobs) and energy efficiency.<sup>19</sup> This strategy recognizes our unique position as a leader in this area.<sup>20</sup>



Connecticut has put in place high-level policy to maximize our share of energy-related business growth. The Department of Energy and Environmental Protection (DEEP) developed the first-ever

Comprehensive Energy Strategy (CES) for the State of Connecticut—an assessment and strategy for all residential, commercial, and industrial energy issues. When implemented, the CES will move Connecticut toward a cheaper, cleaner, and more reliable energy future while creating thousands of jobs.

<sup>&</sup>lt;sup>19</sup> Connecticut Center for Advanced Technology (CCAT), "Final Report: Fuel Cell Economic Development Plan Hydrogen Roadmap," http://www.ct.gov/ecd/lib/ecd/CCAT\_Fuel\_Cell\_FINAL\_Plan\_1-31-08\_DECD\_w\_participants.pdf (Jan 1, 2008)

<sup>&</sup>lt;sup>20</sup> "State of the States" Fuel Cells in America 2014," U.S. Department of Energy, Fuel Cell Technologies Office, (December 2014)



The Connecticut Green Bank (formally known as the Clean Energy Finance and Investment Authority or CEFIA) is the first full-scale clean energy finance authority in the nation. It leverages public and private funds to drive investment and scale up clean energy deployment in Connecticut. It does so by offering innovative, low-cost financing such as the C-PACE program to encourage homeowners, companies,

municipalities, and other institutions to support renewable energy and energy efficiency.

Tourism: Tourism and hospitality represents a \$14 billion industry in Connecticut employing 118,000 people and generating \$1.6 billion in state and local taxes.<sup>21</sup>



According to the World Travel and Tourism Council, tourism is predicted to grow 4.2% annually in the next 10 years worldwide. North American growth is expected to be in the 3.3% range annually over the same period.<sup>22</sup> Connecticut's natural beauty, diverse arts and cultural activities and events, and premier destinations combine to make a focus on tourism a natural fit for our state.

The "still revolutionary" marketing and branding campaign builds on the combined efforts of leading tourism organizations' marketing efforts to comprise the state's primary strategic investment to grow tourism. The "still revolutionary" campaign was launched in the spring of 2012 and in the year following, tourism-related jobs increased by 3%. The sector has been one of the top job generators since the campaign's inception. Additionally, hotel

occupancy in the state has grown – an important indicator of a thriving tourism industry.

This marketing effort is also crucial to ensuring that businesses inside and outside of Connecticut are aware that the state is creating a truly competitive business environment. The campaign serves to highlight the state's attention to 1) strong



workforce; 2) entrepreneurial activities; 3) programs to support company growth; 4) commitment to fiscal responsibility; and 5) regulatory reforms that enhance business opportunities.

Facilitating Growth for Companies Small and Large, New and Mature The state's economic development strategy concentrates on all levels and sizes of business in order to accelerate our economic recovery. The state will continue to leverage its financial and technical resources to assist companies from startup phase through maturity. In addition to strategies aimed at assisting various types of businesses with challenges specific to their operations, the state is active in ensuring that supports are made available that assist all businesses, like affordable high-speed internet.



Research shows that small companies, in comparison to young companies, produce the most new jobs in an economy. Connecticut ranks 7<sup>th</sup> in the nation in patents per 100,000 residents - a good indicator

<sup>&</sup>lt;sup>21</sup> "The Economic Impact of Tourism in Connecticut: For Calendar Year 2013," Tourism Economics, Wayne, PA <sup>22</sup> World Travel and Tourism Council, Travel and Tourism Economic Impact 2014

of the state's innovative potential.<sup>23</sup> However, Connecticut ranks 44th in terms of the number of stage 2 companies (with 10–99 employees) per capita and 34th in terms of the number of startup companies (1-9 employees) per capita in the nation.<sup>24</sup> Thus, while Connecticut has a long history of innovation and patent creation, it is currently not demonstrating the follow-through in bringing these new ideas to market. Therefore, there is much opportunity for more entrepreneurial activity in the state. The State of Connecticut's strategy focuses on initiatives, investments, and assistance that will increase the chances of success for young companies by providing timely access to appropriate resources, including market and product expertise, talent, capital, and ideas.

Connecticut Innovations (CI), a quasi-governmental organization created in 1989 to provide strategic and operational insight to companies to push the frontiers of high-tech industries such as energy, biotechnology, information technology and photonics, plays a key role in the deployment of the state's efforts toward supporting innovation and entrepreneurship. This entity was one of the first early stage investment agencies developed by a state in the country. Since 1995, CI has made more than \$242 million in equity and risk capital investments, leveraging more than \$1 billion in private capital.



To further support entrepreneurs, the Department of Economic and Community Development (DECD) and CI have created an Innovation Ecosystem called CTNext. CTNext is providing the infrastructural underpinnings of Connecticut's innovative ecosystem, such as hubs where people of diverse backgrounds and interests interact with one another. These hubs are comprised of programming like mentor networks, community events, and

access to technical support from universities and other professional individuals and organizations. CTNext is working with entrepreneurship stakeholders to create collaborative, vibrant, and innovative communities that help young companies grow and create good jobs in Connecticut.

Connecticut's economy is reliant on companies of various sizes and ages to ensure a stable long-term economy. The Small Business Express Program (EXP) provides funding and technical assistance to Connecticut's main street small businesses to spur job creation and economic growth. Additionally, the state provides financial and technical assistance to mid-large companies in our targeted clusters that are investing in growing their businesses. Outside Connecticut's borders, the state has worked to attract companies whose business needs fit well with the strengths of our economy.

#### **Exports and Foreign Direct Investment**

Exports are an engine of growth for Connecticut companies accounting for \$15.94 billion,

which was 6.85% of GDP in 2014.<sup>25</sup> The state, through DECD, works closely with its partners at the federal and regional level to provide support services and programs to help Connecticut companies take advantage of opportunities in the global marketplace by diversifying their customer base and their revenue streams.



<sup>24</sup> CTC, The Connecticut Competitiveness Project, Executive Summary,

<sup>&</sup>lt;sup>23</sup> Eversource, 2015 Connecticut Economic Review

http://www.slideshare.net/CTTech/study-reports-connecticut-risks-losing-its-fastest-job-growth-technology-firms (January 5, 2011)

<sup>&</sup>lt;sup>25</sup> World Institute for Strategic Economic Research (WISER), http://www.wisertrade.org; U.S. BEA

Encouraging foreign-owned companies to establish or expand operations in Connecticut is equally important, as they employ 102,600 and invest \$14 billion annually. <sup>26</sup> A study by Business Roundtable shows the dramatic impact globally engaged companies have on the state's economy. These companies account for 49% of the state's private sector output and directly or indirectly support 850,900 private sector jobs.<sup>27</sup>



The state has launched an effort to proactively promote Connecticut abroad as the destination of choice. This strategy is a targeted approach directed to attract prospects from China, Germany and northern Europe, Israel, and Brazil in particular to explore the potential to establish a presence in the state. Currently, Connecticut's biggest export partners are France, Canada, Germany, Mexico, and the United Arab Emirates.

The Connecticut Port Authority, which was enacted by statute in 2014 and 2015, will provide improved opportunities for trade with national and international partners. The Connecticut Port Authority will begin its work in 2015 and will focus on increasing the trade viability of Connecticut's ports through strategic marketing and economic development. Combined with the improved infrastructure from the projects that will be undertaken over the next several decades, the state is making investments to ensure that Connecticut becomes a hub for exporting and importing goods.

 <sup>&</sup>lt;sup>26</sup> U.S. BEA, 2011 employment data, Gross Property, Plant, and Equipment series discontinued after 2007
 <sup>27</sup> The Business Roundtable, Globally Engaged U.S. Companies Drive Jobs and Investment in Connecticut (September 2013)

GROW THE BUSINESS CLUSTERS THAT DRIVE CONNECTICUT'S ECONOMY AND ENCOURAGE ENTREPRENEURIAL DEVELOPMENT Retain and grow our existing job base		
Action	Responsibility	Metrics
Work to ensure companies within the	DECD as lead	• # of jobs created/retained
state retain and grow their workforce		• # of companies retained
Outreach Program tiered approach		•\$ amount of private investment
<ul> <li>Top 100 businesses</li> </ul>		leveraged
<ul> <li>Top 10 business by industry</li> </ul>		• State GDP
		<ul> <li>State employment level</li> </ul>
segment		state employment level
<ul> <li>Top regional businesses</li> </ul>		
<ul> <li>Promote state programs/state</li> </ul>	:	
through PR, partners		
Leverage existing & create industry,		
education and economic		
development organization relationships		
Facilitate ecosystems		prow and connect
<ul> <li>Focus on creating structure for</li> </ul>	DECD/	\$ invested in iterative processing
assistance in manufacturing and	Industry	facilities and assistance
iterative prototyping for manufacturers,	associations/	ø# of CT manufacturers engaged in
including biomedical devices	Bioscience	supply chains
<ul> <li>Provide support to strengthen supply</li> </ul>	and	
chains for manufacturing including	manufacturing	
biomedical and shipbuilding	companies	
Provide better assessment and support	DECD/	# of members in industry
	Industry	associations
for financial firms, with particular focus	associations	<ul> <li># of attendees at</li> </ul>
on non-insurance firms and those	associations	
located in southeastern CT		events/conferences targeted to
		industry
Continue to engage in regional	DECD	ø# of regional initiatives/events
initiatives aimed at strengthening		
aerospace and defensive shipbuilding		
Strengthen Connecti		
Domestic recruitment efforts will focus	DECD and	<ul> <li># of new business opportunities</li> </ul>
on recruiting companies to Connecticut	U.S.	brought to CT
by:	Commerce	• # of new jobs created
• Careful research to target specific,	Department	\$ amount of new private
well-suited businesses	for export	investment, including FDI
Working with CT companies to	support	•Tonnage at CT ports
leverage the supply chain to identify	0000001	
targets outside the state		
Recruit at appropriate industry forums		
<ul> <li>Branding CT in the U.S. market</li> </ul>		
	pur innovation	
Execute CI strategies to support startups	Connecticut	<ul> <li># of companies served</li> </ul>
with expertise and capital	Innovations	<ul> <li># of jobs created</li> </ul>
		<ul> <li>ROI on equity investments</li> </ul>
	1	<ul> <li>Leveraging of private \$</li> </ul>
		<ul> <li>Leveraging of federal \$</li> </ul>
	l	

Implement the Innovation Ecosystem to drive new entrepreneurial activity across all sectors	Connecticut Innovations/ DECD	<ul> <li>Level of new company formation</li> <li># of companies served by CTNext</li> <li># of jobs created</li> <li># of patents issued in the state</li> </ul>
Promote Connecticut's brand to drive economic growth		
Continue to support the "still revolutionary" brand	DECD	<ul> <li>Impact of advertising as measured by # views, # of click- throughs, survey results</li> <li>Tourism visits</li> <li>Perception of CT as a tourist destination and business location</li> <li>Hotel occupancy and ADR</li> </ul>

ENSURE A WORKFORCE THAT MEETS THE NEEDS OF EMPLOYERS A productive and innovative workforce is repeatedly cited by companies as the most important factor in their location decisions. With talent as a key draw for businesses in the state, we must ensure that a high quality and creative workforce is in place and that it grows and responds to the changing needs of our businesses.

The state is addressing immediate skills challenges, disparities in educational attainment

and long-term demographic changes that will impact our workforce. Additionally, with the increasingly technical nature of jobs across all sectors, many Connecticut organizations are evaluating how best to attract and retain individuals with the necessary technical skills and capabilities.



The state recognizes that a multi-tiered approach to developing a workforce and providing the skills needed to meet the market demand is required. A strong partnership amongst education, the training delivery system, and industry is essential. An example of this is the investment of \$20 million in the Advanced Manufacturing Centers at four of the Connecticut community colleges. This investment was a direct result of manufacturers indicating that they were struggling to find talent with manufacturing skills. Additionally, \$15 million in federal funding has been leveraged in three additional community colleges to purchase additional equipment and provide more training at these centers.



In 2013, the state made an extraordinary investment in these initiatives. While other states were cutting their higher education budgets, Connecticut committed more than \$1 billion to UConn's STEAM programs, recognizing that the workforce of the future will be data-driven. Through this 10-year effort, the state will add 70% more seats to its engineering school, a new campus for digital media, and an expansion of R&D throughout the university. This unprecedented investment will ensure the talent required by

future businesses will be met.

The newest investment in workforce development is the Connecticut Early College Opportunities (CT-ECO) program. The CT-ECO program provides public school students with the opportunity to receive concurrent high school diplomas and associate's degrees in targeted areas in 4-6 years, at no cost to the student. These programs are each tightly aligned with local industry partners like IBM and Electric Boat, and students are first in line for jobs with partner organizations upon completion of the program. As of Fall 2015, there

will be four CT-ECO programs in Connecticut with programs in technology, manufacturing, and financial services.



The Manufacturing Innovation Fund (MIF) is also working to address the needs of and gaps in the Connecticut workforce. Based upon the input of industry leaders on the Advisory Board of the fund, MIF is providing funding to manufacturing companies for a variety of needs, but there is an emphasis on workforce development, including incumbent worker training and apprenticeship programs.

ENSURE A WORKFORCE THAT MEETS THE NEEDS OF THE FUTURE			
Understand the current and future needs of employers			
Action	Responsibility	Metrics	
<ul> <li>Create training programs to meet current gaps in our talent pool</li> <li>Use partners such as CETC, DOL and employer groups to evaluate future needs of the employers in the state, with a special emphasis on our targeted clusters and highest unemployment areas</li> </ul>	DOL, CETC, DECD, CI	<ul> <li># of job placements</li> <li>Unemployment levels</li> <li>#of training programs in targeted skills and geographic areas</li> </ul>	
With education partners, grow and enrich our talent pool to address any current gaps			
<ul> <li>Expand manufacturing technology programs and grow engineering capacity in community colleges</li> <li>Assess other areas (such as healthcare, insurance/financial services, and information technology)</li> </ul>	Community Colleges, Technical Schools, UConn, Private colleges and universities	<ul> <li># of graduates</li> <li># of placements</li> </ul>	
Develop longer range initiatives to invest in our institutions around the key STEAM skills			
<ul> <li>Partner with education to offer STEAM courses to address employer needs</li> </ul>	UConn, K-12, Technical Schools	<ul> <li>Measure success of UConn STEAM programs</li> <li>Engage businesses for their feedback</li> <li>Measure success of CT-ECO program</li> </ul>	

#### CREATE LIVABLE, VIBRANT COMMUNITIES

Much of the American landscape is a sea of industrial, agriculture, and suburban subdivisions dotted with office parks and strip malls. In contrast, there is not a single town or village in Connecticut that is like anywhere else in Connecticut or anywhere else in the country. Each has its own history, shaped by the numerous ethnic nationalities who settled there, with unique architecture and cultural venues, one-of-a-kind shops and restaurants, and exceptional characters, living and dead, who have left their marks, etched into buildings and onto the landscape. This depth of local character is a significant source of our current and future economic advantage, because the mobile young talent who will fuel the creation of the next economy value authentic places that offer opportunities for inspiration, connection, and personal impact.



Diversity of people is also a critical prerequisite to communities that inspire and encourage innovation. In order to ensure that investments made by the state are reaching a wide variety of Connecticut residents, the Small Business Express program is emphasizing assistance to minority- and women-owned businesses. We need to ensure that we continue to use state policy to ensure success for all types of people in our many great communities.

Investing in our state's creative economy and impressive arts infrastructure will advance the attractiveness and competitiveness of Connecticut cities, towns, and villages as meaningful communities in which to live, work, learn, and visit. Creative enterprise is an essential component of Connecticut's mission to develop and implement strategies to increase the state's economic competitiveness. The non-profit arts sector in Connecticut, for example, contributes more than \$650 million in direct industry expenditures and supports more than 18,000 full time equivalent jobs.<sup>28</sup>

Through its grants and technical support, the Department of Economic and Community Development is helping to strengthen organizations in the arts and culture sector, thereby enhancing each community's competitive edge, bridging the social and economic divide, creating rich and meaningful experiences for residents and visitors, helping communities define and celebrate their distinct assets, and contributing to the development and retention of a creative workforce. The Department of Economic and Community Development is also currently managing a portfolio of more than \$200 million in capital projects, including more than \$50 million for arts and cultural organizations.

To help businesses create and retain jobs, quality housing choices are necessary. Affordable and workforce housing, particularly in and around transportation networks will serve as a building block for our future growth. The Department of Housing, along with the quasi-governmental agency the Connecticut Housing Finance Authority (CHFA), is investing over \$500 million to help leverage private sector funding for the creation of thousands of new housing units throughout the state. Additionally, a \$15 million predevelopment and acquisition loan fund has been developed by CHFA, DECD, and the Local Initiatives Supportive Corporation (LISC) to encourage higher-density, mixed-use development near existing and new transit hubs to create more livable, walkable communities, and to expand access to jobs and housing.

<sup>&</sup>lt;sup>28</sup> Americans for the Arts, Arts & Economic Prosperity IV, National economic impact survey in CT. The reported figures represent direct expenditures of reporting nonprofit organizations and their audiences in 2010 (approx. 29% of the state's arts and cultural agencies reported)

CREATE LIVABLE, VIBRANT COMMUNITIES			
Integrate arts/culture and preservation with economic development			
Action	Responsibility	Metrics	
<ul> <li>Focus arts grants and historic preservation grants on projects that catalyze economic and community development and support the existing arts and culture infrastructure</li> </ul>	DECD	<ul> <li># of historic structures preserved</li> <li>\$ of federal and state historic tax credits</li> <li>\$ granted for arts awards</li> </ul>	
<ul> <li>Encourage enhanced integration of arts into economic development initiatives</li> </ul>	DECD/ Regional and local arts and tourism organizations	<ul> <li>Increased traffic at arts attractions</li> <li># of jobs created in arts sector</li> </ul>	
Ensure quality housing at a broad range of prices			
Action	Responsibility	Metrics	
<ul> <li>Implement the \$500M commitment to build new and renovate existing workforce and affordable housing</li> </ul>	DOH/CHFA	<ul> <li># of new affordable units</li> <li># of market-rate units in targeted locations</li> <li># of new supportive units</li> </ul>	

### INVEST IN THE INFRASTRUCTURE AND SUPPORT SYSTEMS THAT WILL FOSTER BUSINESS GROWTH



The state's comprehensive approach to economic development looks beyond direct financial assistance programs. It focuses on areas such as transportation infrastructure, energy policy and government efficiency, which all contribute to making Connecticut a more competitive place to do business.

#### Transportation Infrastructure Efforts

In 2015, Governor Malloy unveiled a 30-year, \$100 billion <u>plan</u> to update and improve Connecticut's infrastructure. Included in the plan are increased speed, access, and frequency of rail and freight transportation within Connecticut but also to major regional hubs like New York, Boston, Philadelphia, and Montreal.<sup>29</sup> Additionally, the plan will widen existing interstate highways, such as I-84 and I-95, at key points, as well as additional upgrades to Bradley International Airport.<sup>30</sup> The many projects and upgrades included in the transportation plan are aimed at making Connecticut's infrastructure safer, creating more diverse modes of transportation, reducing carbon emissions, improving quality of life for residents, and making it easier for businesses to transport people and goods.



New transportation infrastructure investment holds the promise of revitalizing areas of the state serviced by rail and rapid transit. Our most significant commuter rail corridor,

<sup>&</sup>lt;sup>29</sup> "Let's Go CTI Connecticut's Bold Vision for a Transportation Future,"

http://www.ct.gov/dot/lib/dot/documents/dcommunications/ctdot\_30\_yr.pdf (February 2015), Page 15 <sup>30</sup> "Let's Go CTI Connecticut's Bold Vision for a Transportation Future," Page 32

from New Haven to New York, is the beneficiary of many upgrades currently in operation or soon to be in place. Additionally, the New Haven Hartford Springfield (NHHS) Rail project will dramatically increase passenger rail in the corridor staring in late 2016 or early 2017. The entire region from New York to Montreal will benefit from this and related investments in the next decade. Travel times will be cut, and there will be peak service every 30 minutes once the project is complete.

CTfastrak is a Bus Rapid Transit System – the first in Connecticut's history – that serves communities between New Britain and Hartford. Ridership on CTfastrak has surpassed initial estimates, and the system will be expanded in East Hartford and Manchester. All these transportation projects bring the potential for transit-oriented development around transit stops.



#### Smart Growth for Towns and Cities

"Smart growth," including sustainable development, brownfield redevelopment, historical preservation and renovation, and transit-oriented development, helps communities attract businesses and workers. These new approaches to land-use planning, transportation, housing, environment and human needs will be integrated into our strategy and action plans in a way that makes them integral to our future economic activity. By leveraging previous investments in infrastructure with new developments and remediation, existing assets can be utilized in new and creative ways. In turn, we can achieve the goal of making our urban centers net contributors to economic growth in the state, reversing their lagging performance in recent decades.

Connecticut is now embracing these new approaches to development to meet the needs of the new economy and its workforce. Three regions of the state won highly competitive U.S. Housing and Urban Development (HUD) grants under the sustainable communities program in the past two years. Only 45 awards were made nationwide. These grants dovetail well with the current efforts at the state level of DECD, DEEP, and the Department of Transportation (DOT) to direct future investments of state funds in a coordinated fashion consistent with sustainable community goals.

Over two decades, since the term "brownfield" was first applied to environmentally



challenged properties, Connecticut has continuously developed increasingly beneficial public policies and tools to address regulatory and liability issues and the financial costs associated with remediation and reuse. Since 2012, Connecticut has invested approximately \$125 million in brownfield properties across the state, helping to prepare more than 14,000 acres of land for development across more than 100 projects. The continued investment in redeveloping brownfield properties is expected to arow, given the current leveraging of \$4 of non-state investment for every \$1 in public funding spent on these important projects. The State of

Connecticut has also developed a suite of liability relief programs to further ensure longterm investments in remediation and redevelopment of brownfield properties.

With the new investments in transportation that have recently been made in Connecticut, like CTfastrak, and those to come with the invigorated transportation plan set forth by Governor Malloy in 2015, transit-oriented development is becoming an increasingly important strategic component. As Connecticut's transportation infrastructure is diversified and improved, the state is committed to facilitating development that is strategically aligned with the important needs of its residents, including access to public transportation,

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walkability, and ease of access to necessary goods and services. Connecticut is also making significant investments in infrastructure and other capital projects in cities and towns throughout the state, including utility and sewer expansion, streetscape improvement, and new construction projects.

#### **Comprehensive Energy Policy**

In 2013, the Governor and the Department of Energy and Environmental Protection created the <u>Comprehensive Energy Strategy</u> for the State of Connecticut. At the heart of the strategy is a series of policy proposals aimed at creating cleaner, cheaper, and more reliable energy sources for the state.

The plan uses limited government resources to leverage private capital and increase the flow of funds into energy efficiency, renewable power, natural gas availability, and a 21st century transportation infrastructure that promotes mobility options, transit-oriented development, and market-based opportunities for clean fuels and clean vehicles. It identifies natural gas as a bridge to a truly sustainable energy future, and puts forward a seven-year game plan for expanding access to natural gas across Connecticut with a goal of providing nearly 300,000 Connecticut homes, businesses and other facilities with an energy choice that includes natural gas. The strategy calls for an expanded commitment to "all cost-effective" energy efficiency efforts. These revised energy provision strategies have also yielded environmental benefits by lowering emissions from electricity production. Since 2007, the increased usage of natural gas has led to a 71% reduction in nitrogen oxides, 95% decrease in sulfur dioxide emissions, and 28% reduction in carbon dioxide emissions in New England.<sup>31</sup>

To ensure reliability, the state is also investing in "micro-grids" that allow off-grid generation of electricity for critical services and businesses. Together these efforts have resulted in a 12% decline in energy costs for the state – and more reductions are expected as the strategy is executed. Additionally, the Connecticut Green Bank administers programs like C-PACE that will continue to provide opportunities for lowering energy costs.

#### LEAN and Reducing Regulatory Complexity

The State of Connecticut is committed to transform its government agencies to deliver enhanced service to its constituents while keeping cost under control. To this end, all agencies are engaged in applying LEAN principles and practices to identify improvement opportunities in the way they do business and deliver services. As these agencies continue to track toward leaner, more efficient organizations, they will in turn be better positioned to pass those improvements to businesses and communities around the state. Shortening turnaround times, making it easier to get answers, and creating simpler more comprehensible programs are all goals of the LEAN effort. These efforts are already paying off for constituents:

- DEEP now issues 90% of its permits in 60 days
- DOT's State Traffic Commission has streamlined the process for permits reducing processing time 83%, with 70% of applications now being improved in 30 days or less
- DECD's Brownfield Remediation Department has reduced the time from the announcement of funding for a project to closing the contract on that project by over 68% from 2013 to 2015

<sup>&</sup>lt;sup>31</sup> CT Department of Energy and Environmental Protection, May 2015.

In October 2013, the Governor issued Executive Order 37, calling for a review of all regulation in the state. Inviting the public to provide input, he also instructed all agencies to evaluate their regulations with an eye to streamline and simplify wherever possible. Recommendations were made to the Governor early in 2014, resulting in nearly 1,000 pages of superfluous sections of code removed from the Connecticut regulations.

INVEST IN THE INFRASTRUCTURE A	ND SUPPORT SYST GROWTH	EMS THAT WILL FOSTER BUSINESS	
Continue efforts to create a more responsive government that remakes the regulatory environment and makes it easier to do business in the state			
Action	Responsibility	Metrics	
<ul> <li>Continually review regulatory</li> </ul>	State agencies	<ul> <li>Customer satisfaction</li> </ul>	
processes and procedures to		<ul> <li>Time to complete permitting</li> </ul>	
maximize efficiency and		processes	
effectiveness			
	educe the cost o		
Action	Responsibility	Metrics	
<ul> <li>Execute the Comprehensive</li> </ul>	DEEP	<ul> <li>Cost of energy and</li> </ul>	
Energy Strategy that will		distribution	
provide cheaper, cleaner,		<ul> <li>Energy outages</li> </ul>	
more reliable energy		<ul> <li>Improvement in CO<sub>2</sub> outputs</li> </ul>	
<ul> <li>Launch a campaign to</li> </ul>	CT Green Bank	• # of transactions	
reduce energy costs for		<ul> <li>Capital invested</li> </ul>	
residents and businesses while		Energy savings     Bayda active NDV ( IDD, SID, and a	
reducing our greenhouse gas		<ul> <li>Payback, NPV, IRR, SIR, and cash flow</li> </ul>	
emissions, especially industrial manufacturers through C-		<ul> <li>Reduction in CO<sub>2</sub> emissions</li> </ul>	
PACE			
Continue to strategica	ly invest in transn	ortation infrastructure	
Action	Responsibility	Metrics	
<ul> <li>DOT to invest to improve</li> </ul>	DOT	Delivery of transportation	
transportation systems in the		projects on time and budget	
state			
	ly-friendly, moderr	, and resilient development	
<ul> <li>Continue investments to make</li> </ul>	DECD with DEEP	<ul> <li># of brownfield projects</li> </ul>	
brownfields into usable and	support	funded	
productive properties		# of redeveloped brownfields	
		in state	
• Transit-Oriented Development:	DOT, DECD and	Engagement of towns in TOD	
Work with municipalities to	TOD cross-	work on rails/busways;	
develop a plan for the rapid	agency team	development and execution	
transit systems in the state (ex:	(led by DECD)	of plans in TOD	
CTfastrack and the New			
Haven-Springfield line)			
	]		